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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,480	10/22/2002	Eric J. Hansen	71189-1444	5668
20915	7590	06/07/2005	EXAMINER	
MCGARRY BAIR PC 171 MONROE AVENUE, N.W. SUITE 600 GRAND RAPIDS, MI 49503			CARRILLO, BIBI SHARIDAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,480

Applicant(s)

HANSEN ET AL.

Examiner

Sharidan Carrillo

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 30-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-63 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03122003, 11062002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. (US2002/0112741).

Pieroni et al. teach a hand-held scrubbing device for cleaning a surface. In the

Art Unit: 1746

Embodiment of Fig. 3, Pieroni teaches a heating element 62 which can be a non-electrical heating element, such as a chemical heating element impregnated in the scrubbing surface which employs a chemical which creates heat through an exothermic reaction when contacted with water.

Pieroni fails to teach recovering soiled cleaning solution from the surface. It would have been obvious to a person of ordinary skill in the art to remove the soiled cleaning solution from the surface for purposes of removing contaminants thereon. In reference to claim 2, refer to paragraph 45. In reference to claims 28-29, Pieroni teaches transferring the head directly to the cleaning solution as a result of the chemical reacting with water and transferring the heat indirectly to the cleaning solution as result of heating the scrubbing element which contacts the cleaning solution.

5. Claims 3-9, 24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. (US2002/0112741), as applied to claims 1-2 and 28-29 in paragraph 4 above, and further in view of Dorney (6029651).

Pieroni fails to teach a phase change and sodium acetate and an alloy. Specifically, Pieroni fails to teach the limitations of claims 3-9, 24, 26, and 27. Dorney teaches that fluid can be heated as a result of a heat generating fluid located within the chamber. In the embodiment of Fig. 4, Dorney teaches sodium acetate reacting with aluminum to generate heat, and form crystallization of sodium acetate (col. 4, lines 58-60, col. 5, lines 1-15, col. 6, lines 13-15).

It would have been obvious to a person of ordinary skill in the art to modify the chemical of Pieroni to include sodium acetate and aluminum, as taught by Dorney, for purposes of generating an exothermic reaction used for heating a fluid.

6. Claims 10-11, 17-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. (US2002/0112741) in view of Dorney (6029651), as applied to claims 3-9, 24, and 26-27, as described in paragraph 5 above, and further in view of Pace et al. (US2002/0040503).

Pieroni et al. in view of Dorney teach the invention substantially as claimed with the exception of an exothermic reaction resulting from acid/base reactions. Pace teaches a process for cleaning a substrate by contacting the substrate with first and second compositions, wherein upon contact of said two compositions, heat is generated and the cleaning performance is improved. In paragraphs 57-59, Pace teaches heat generation by reacting an acid with a base. The reagents include organic and inorganic acids and bases. It would have been obvious to a person of ordinary skill in the art to have modified the chemical of Pieroni et al. to include acid/base reactions, as taught by Pace et al., for purposes of generating an exothermic reaction to form a heated fluid, thereby enhancing the cleaning performance of the substrate.

In reference to claims 11, and 17-20, the limitations are inherently met since Pace et al. teach the same acids and bases as the claimed invention. In reference to claims 22-23, refer to paragraphs 58-59. In reference to claim 25, Pace et al. teach forming a heating cleaning solution.

Art Unit: 1746

7. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieroni et al. (US2002/0112741) in view of Dorney (6029651) and Pace et al. (US2002/0040503), as applied to claims 10-11, 17-23 and 25, as described in paragraph 6 above, and further in view of Wool (3357923).

Pieroni, as modified by Dorney and Pace et al., teach the invention substantially as claimed with the exception of stearic acid and a base forming an exothermic reaction. Wool teaches cleaning a surface by reacting the salt of stearic acid with a base, such as NaOH, to produce an exothermic reaction (col. 2, lines 25-27, 60-65). It would have been obvious to a person of ordinary skill in the art to have modified the method of Pieroni, to include stearic acid in combination with a base, as taught by Wool, for purposes of producing an exothermic reaction used for cleaning purposes. Pieroni, as modified by Dorney, Pace, and Wool fail to teach triethanolamine. However, it would have been within the level of the skilled artisan to include triethanolamine since Pace teaches that reactions of any base and base generate an exothermic reaction. In reference to claim 13, one would reasonably expect a reduction in pH as a result of the addition of acid.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Milligan et al. teaches a reusable heat pack. Gray et al. teaches an exothermic cosmetic. Pieroni teaches a scrubbing device with an exothermic chemical reaction.

Art Unit: 1746

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc



SHARIDAN CARRILLO
PRIMARY EXAMINER